

**Evaluation and Monitoring of Culturally Appropriate  
Treatments for Vandalism at Rock Image Sites:  
report on the results of research carried out under  
NCPTT Grant Agreement No: MT-2210-04-NC-13.**

Report prepared by

J. Claire Dean

(Principle Investigator, Dean and Associates Conservation Services)

Meg Abraham

(Independent Conservation Scientist)

Cultural Resources Protection Program, Confederated Tribes  
of the Umatilla Indian Reservation (NCPTT Grant Recipient)

June 2007

**Evaluation and Monitoring of Culturally Appropriate  
Treatments for Vandalism at Rock Image Sites: report  
on the results of research carried out under NCPTT  
Grant Agreement No: MT-2210-04-NC-13.**

Report prepared by  
J. Claire Dean (Principle Investigator, Dean and Associates Conservation  
Services)  
Meg Abraham (Independent Conservation Scientist)  
Cultural Resources Protection Program, Confederated Tribes of the Umatilla  
Indian Reservation (NCPTT Grant Recipient)

June 2007

Research funded under Grant Agreement No: MT-2210-04-NC-13 from The  
National Center for Preservation Training and Technology (NCPTT) – A Division  
of the National Parks Service, United States Department of the Interior.

**ABSTRACT:**

The following report details work done to enhance the understanding of Tribal concerns and interests regarding the conservation of rock image cultural heritage sites. The work pertains to Tribes located in the Pacific Northwest of the United States. The study included research into past treatments at these sites and a survey of various Tribal groups to develop some understanding of their general preferences regarding management of conservation programs. The aim of the study is to further develop existing lines of communication between land management organizations, conservators, and the various Tribes in the region. Results are presented in a tabular form with discussion and interpretation of responses to specific questions.

## TABLE OF CONTENTS:

1. Introduction	4
2. Contemporary Cultural Context and Rock Image Sites	5
3. The Hoped for function of this document	7
4. The present study	8
5. Study Results - Summary of responses to each question	10
6. Interpretation of results	17
7. Future Work	18
8. Recommended next steps	18
9. References	19

APPENDIX A: Cover Letter, Questionnaire and Supporting Documentation  
Provided to Survey Participants.

APPENDIX B: Selected Responses to the Questionnaire for the Evaluation and  
Monitoring Treatments for Rock Images.

## 1. Introduction

The following document summarizes the results of a research project aimed at starting a dialog between non-Tribal land managing agencies, professional conservators and Native American cultural resource management offices about appropriate treatments for vandalism at rock image<sup>1</sup> sites. It is hoped that this work will lead to a better understanding of each entity's approaches and concerns when working towards the common goal of protecting and preserving this particular form of cultural heritage.

The study group was limited to Tribal organizations within the Columbia River Plateau region primarily to keep the size of the study group manageable within the resources available and to restrict data to the cultural belief systems related to the region. It was also felt that the study would benefit from the close working relationship that already exists between the Cultural Resources Protection Program of the Confederated Tribes of the Umatilla Indian Reservation (CTUIR - CRPP) and other Tribal groups in their common region.

An additional aim of this work is to begin a dialogue within the Tribal communities as well as with other governmental and non governmental organizations regarding the conservation and preservation of cultural history sites in general that are pertinent to Native American communities and their cultures. The hope is that at some time in the future, this work can be combined with other research and dialogue to act as a tool for the Tribes to develop more accessible guidelines for conservation of sites related to their cultural heritage. In short we hope that this survey will stimulate discussions that may eventually lead to development of some cross Tribal policies regarding preservation of cultural sites.

The further hope is that this type of dialogue will one day result in a set of "conservation principles" regarding Native American cultural heritage. The ultimate aim is a set of minimum standards like those defined by other governments in such documents as the Burra Charter in Australia (Australia ICOMOS, 1999), the ICOMOS charters subscribed to by much of western Europe (ICOMOS 2007), the China Principles (these heritage preservation guidelines were drawn up by China's State Administration for Cultural Heritage, along with the Getty Conservation Institute and the Australian Heritage Commission, and adopted in 2000 (China ICOMOS 2000)) or the Venice Charter (ICOMOS 1964). These Charters provide guidance for the conservation and management of places of cultural significance (cultural heritage places), and are based on the knowledge and experience of conservators, cultural heritage management organizations, and the advice and consent of the cultures

---

<sup>1</sup> The term "rock image" is used throughout this document as a substitute for the more common term "rock art". This is in deference to a preference expressed to the authors by Native American elders who find the latter term inaccurate and having inappropriate connotations. As used here "rock images" is a general term that includes petroglyphs (images carved, pecked or scratched into a rock surface) and pictographs (images painted or drawn on a rock surface).

represented by or affiliated with the site (in our case the Tribal cultural resources management and protection offices and various Tribal culture councils).

It is important to note that those documents referenced above were achieved through years of dialogue, not overnight. Likewise, an acceptable set of broad guidelines for the conservation of rock image sites, or all cultural heritage sites, in the Columbia River Plateau and beyond will require extensive dialogue and communication between the various Tribal entities. The specific and unique cultural needs of these groups must be identified and assessed by the Tribes themselves. The limitations of outside organizations and individuals to fully assimilate these needs should be recognized, and every effort to improve communications between the Tribes is viewed by the authors as a step toward a coherent approach to aid outside organizations to serve the needs of the interested Tribal Governments.

The survey sent out to the various Tribes was deliberately short. As previously mentioned, the intent was to stimulate internal discussion. We were encouraged by the fact that the survey answers imply that there is some basis for a consensus about the treatment of Native American Cultural Heritage sites in the region. Whether or not these may one day be developed into this type of loose charter that Tribes can sign up to or modify for their own uses is yet to be seen, but we found that there is some reason for hope. Further no such consensus can ever be reached unless the nations form informed policy through dialogue.

The following summarizes the study and our conclusions regarding the responses to the study. We hope that the results will aid the Tribes, as well as the broader conservation community, with developing approaches to conservation of rock image sites – and by inference all cultural sites – related to Native American cultural heritage.

## **2. Contemporary Cultural Context and Rock Image Sites**

One of the most important factors in the evaluation of conservation methods for sites related to Native American culture is the fact that in almost all cases these are not “dead” places. Rather, the sites are active, living manifestations of a continuing culture. This may be especially pertinent to rock image sites. Many sites are still used in cultural ceremonies or other activities. Further, it must be recognized that some of the cultural practices associated with sites may be intensely private and governed by cultural laws that prohibit open access to both information about site use as well as the practices themselves to non-Native Americans, including conservators and outside agencies. The act of consultation with the appropriate Tribes takes on an added significance in these cases. Conservators and outside agencies need to rely on Tribal representatives to make decisions about the level of intervention at a site. The aim of conservation

is not only to stabilize a site and protect the look of it, but to support the cultural context and value of the site.

These issues have been raised and are dealt with as a whole, when caring for ethnographic artifacts associated with living indigenous cultures, through the field of Material Culture Studies (the study of the relationship between artifacts and social issues and beliefs). Interaction with this field has proved to be of enormous benefit to the conservators on many levels, notably it has led to an improved and better informed approach to the care of artifacts. Further benefits include improvements in methodology for considering tangible and intangible information, better or more complete observation during conservation, and recognition and understanding of issues new to conservation. Moreover, Indigenous peoples have also gained information about the artifacts that may not have previously been known to them or knowledge that had been lost to time and a history of cultural disruption. For example the sources for certain materials or clues as to an object's exact method of use, or a more complete history of how the object may have been cared for and used in the context of a museum collection..

In her article "*Changing the Way Professionals Work: Collaboration with Preservation of Ethnographic and Archaeological Objects*", conservator Dr. Nancy Odegaard addresses this topic succinctly (Odegaard 2005). Two statements she makes from the perspective of ethnographic and archaeological conservation are of particular relevance when considering the important relationship between cultural context and rock image sites.

*"Today it is understood by many ethnographic conservators that without context, the use of ethnographic objects in museums and their alteration (change through reassembly, consolidation treatment, replacement parts, pesticides, or exhibit mounts) can actually contribute to physical deterioration, to the loss of vital cultural information, and to the distortion of intangible integrity"*

In terms of rock image sites this means that uninformed management and conservation of sites can lead to unintended loss of cultural information and damage to cultural aspects of the site that are initially unintelligible to people from other cultures.

Odegaard goes on to state that in order to stand a chance of retaining the maximum amount of information – tangible and intangible – held by an ethnographic object undergoing conservation treatment "... *collaboration with indigenous peoples is necessary.*" We would argue that the word "essential" should be added to that statement, especially when considering the treatment of rock image sites.

With this understanding of the importance of the cultural context of sites comes a new imperative for conservators. The primary objectives of the treatment of

cultural heritage sits may include factors other than simply how to improving its appearance. Determining how to preserve the function of the site or factors such as access to it, impose new challenges for conservation. In some cases, the site may even be best viewed as non-permanent due to cultural practices. For example, deciding to allow the use of ceremonial smoke near a rock image panel despite clear indications that the accumulating soot from the smoke is gradually obscuring the images. This flies in the face of conventional conservation practice that would call for a prohibition on the use of the smoke.

Less obvious is the situation where a site is used for a function considered culturally private. In this case the conservator may not be privy to the uses or beliefs that would affect decisions regarding the best choice of conservation treatment. Conservators may instead have to rely on Tribal guidance to choose appropriate conservation materials and methods.

In order to address the needs of a community who may continue to use or honor sites, conservators need to be taught to accept subtle instruction about what may be the most culturally appropriate materials and methods for treating sites. Conservators and site managers must also be able to accept the concept that the look of the site may not be paramount. That the conservation and preservation of the site may not be appropriate, and that they may not always be privy to the reasons for such a decision.

To that end, Tribes may wish to begin to develop ideas as to conservation treatments which meet their cultural needs and to communicate those preferences to land managers and conservators. In so doing, they can better achieve their goals regarding sites under their purview.

### **3. The Hoped for function of this document**

The authors hope that this document can aid Tribes and others who support conservation of Native American cultural heritage to develop guidelines for conservation which emphasize the needs of Native American communities. We further hope that eventually a charter or some form of agreement among the Tribes begins to develop. The function of charters is to elucidate current preferences and principles in conservation of sites. We believe that a specifically culturally aware set of principles would help to facilitate responsible conservation by giving conservators and other agencies the tools to understand the limits imposed by the situation of a living, functioning sites. This could start with guide lines specifically for rock image sites.

The purpose of this document is not to speak for any single Tribe or other group involved in the decisions regarding rock image site conservation. As with all conservation projects, each is unique and each must be approached with both research and consultation at its foundation. While this survey does demonstrate

some general agreement about conservation practices at rock image sites related to Native American heritage, it is incomplete and only serves to point a direction for further research and discussion.

#### **4. The present study**

The present study is made up of three phases. The first two have been completed and the third has begun (with the dissemination of this report to the tribes included in this study) and will develop and hopefully continue as a result of the information gathered, considered and presented during the first two phases.

##### **Phase 1:**

The first phase focused on a survey of the literature for existing conservation treatments potentially appropriate for the treatment of rock image sites to remove graffiti vandalism using conventional conservation approaches. As the treatment of rock image sites is highly specialized, relatively rarely performed (when compared to the treatment of other forms of cultural heritage) and even more scarcely published, methods used to treat materials similar in nature where considered, such as painted and unpainted stone sculpture, stone structures and other architectural features fabricated from stone. To be considered for inclusion in our study, treatments had to be acceptable under current conservation guidelines for practice, they had to be cost effective, time and resources efficient for treating potentially very large surface areas and have a proven track record in the treatment of stone (but not necessarily rock imagery).

Nine potential treatments were identified. They were:

- Chemical poulticing
- Micro blasting (airabrasive technologies)
- CO<sub>2</sub> blast cleaning
- Water washing
- Laser cleaning
- Over painting or visual reintegration
- Heat
- Steam cleaning
- Monitoring (no physical treatment intervention)

Of these treatments laser cleaning, and steam cleaning were field tested specifically for this study; a demonstration of CO<sub>2</sub> blast cleaning was observed; all others were assessed based on prior extensive use by the authors.

Laser cleaning was also demonstrated on two different occasions at different locations to representatives of Tribal cultural resource offices, culture committees and Tribal elders. All of the Tribes represented in our study group either attended one of these demonstrations or were invited to attend.

The selected methods were then described and summarized. This text was provided to the study group of Tribes as supporting documentation for the questionnaire that was the focus of Phase 2. Appendix A contains a copy of the text that supported the questionnaire.

#### Phase 2.

Phase 2 consisted of a questionnaire asking for information and comments related to the process of conserving rock image sites and treating graffiti. The questionnaire was drawn up jointly by the CTUIR - CRPP, J. Claire Dean and Meg Abraham, with CTUIR - CRPP taking the lead as it was felt important that solicitation of such information should be done on a Tribe-to-Tribe basis and to insure that appropriate language was used. For this reason, the sending out of the questionnaire, follow up contact and the receipt of the responses was handled by the CTUIR - CRPP. Appendix A contains the materials sent to each Tribe.

The cultural resource management offices of ten Columbia Plateau Tribes were contacted, sent the survey and asked to respond. The questionnaire was provided in both hard copies by mail and through e-mail. It was first sent out in January 2006 and again in December 2006 as a result of a lack of any response to the initial contact. During the twelve months between formal postings, the topic of the survey was raised with various Tribal representatives during e-mail and phone conversations and during casual meetings in an effort to encourage responses.

The Tribes and Tribal offices contacted were:

- Confederated Tribes of Warm Springs, Cultural Resources Department
- Wanapam Band, Cultural Representative
- Nez Perce Tribe, Cultural Resources Program
- Coeur d'Alene Tribe, Lake Management Depart./Cultural Resources
- Confederated Salish & Kootenai Tribes, Tribal Preservation Department
- Yakama Nation, Cultural Resources Program
- Confederated Tribes of the Colville Reservation, History/Archaeology Program
- Spokane Tribe, Culture & Heritage Program

- Kalispel Tribe, Cultural Resources Program
- Confederated Tribes of the Umatilla Indian Reservation , Cultural Resources Protection Program

The survey as a whole can be found in Appendix A. The questions were chosen to prompt further discussion as much as to provide specific answers to specific conservation problems. The questions were developed based on the author's prior experience with conservation in general and Native American heritage sites specifically. Thus the questions lean toward issues of cleaning criteria, conservation priorities, and issues of consultation with the Tribes.

Response was very slow in coming. All needed to be encouraged by either phone or e-mail follow up to respond; no doubt an indication of how busy each office was with field work during the summer months , but also possibly a cautionary reaction to being asked for this type of information and opinion. Additional causes for the slow response were likely the need for such a request to be review by several internal Tribal committees and concerned groups. Eventually between December 12<sup>th</sup>, 2006, and February 6<sup>th</sup>, 2007, seven Tribes responded out of the ten contacted.

A general overview of the results of the survey is presented below. Appendix B lists some specific answers to survey questions. Responses to survey questions are not attributed to particular Tribes. It was felt that there was a greater likelihood that Tribal committees responsible for answering these questions might be more willing to deal in specifics about conservation needs if the respondents remained anonymous. Further, it was felt that if further discussion was generated the Tribes have the option of stating their opinions more fully at another time such as an inter-Tribal meeting.

Phase 3: Phase 3 has begun with the dissemination of this report to all of the Tribal offices originally contacted for this study. It is hoped to continue the work as described in section **8. Recommended next steps**, below.

## **5. Study Results - Summary of responses to each question**

The responses to the questionnaire can be tabulated and summarized as follows.

### *Question:*

- 1) If a site has been defaced by graffiti, should it be conserved (cleaned up)? If so what is most important to you as a group, the cleaning of the site or the impact of cleaning on the site and surrounding environment and area?

Responses:

	Respondents						
#1 options	A	B	C	D	E	F	G
Clean/no							
Clean/yes	X	X	X	X	X	X	X
Most important – cleaning	equal	X	X	X	equal	Preference unclear	X
Or – impact on site and environment.	equal				equal		

All respondents stated that cleaning the site is important and should be carried out.

Four stated that cleaning the site was more important than the potential impact of a treatment on the site itself and its surrounding environment, two said that cleaning the site was equally as important as any potential impact cleaning may have on the site and its environment. One respondent did not state a preference.

In general it seems that removing graffiti is considered to be important and necessary – some pointed out the tendency for more graffiti to occur if the original vandalism is not dealt with. All felt that the cleaning of a site was of top priority, but impact on the site and environment was also of concern.

Question:

- 2) What criteria for cleaning are most important to you (please rank)
  - a. Preservation of the cultural/spiritual uses of the site ( )
  - b. Esthetic concerns – preservation of the images ( )
  - c. Financial concerns – costs involved ( )
  - d. Ecological concerns – prevention of contamination of the broader environment during cleaning ( )

*Responses:*

#2 options	Respondents						
	A	B	C	D	E	F	G
a. cultural/spiritual	1	1	1	1	1	2	1
b. esthetics	3	3	3	3	3	3	2
c. financial	4	4	4	4	4	4	3
d. ecological	2	2	2	2	2	1	2

Five respondents provided the same order of criteria priorities;-

1<sup>st</sup> – a (preservation of cultural/spiritual integrity)

2<sup>nd</sup> – d (ecological preservation regarding treatment methods and materials)

3<sup>rd</sup> – b (aesthetic appearance of images)

4<sup>th</sup> – c (financial cost)

Six placed response a. (cultural/spiritual preservation) as 1<sup>st</sup> priority

One placed d. (ecological concerns) 1<sup>st</sup>. with a. (cultural/spiritual preservation) 2<sup>nd</sup>.

One placed d. (ecological concerns) and b. (aesthetics) as equal 2<sup>nd</sup>.

Therefore the majority placed protecting the cultural and spiritual integrity of the site as being of highest importance, with all placing cultural/spiritual concerns and ecological protection as their top two criteria. All placed c (financial cost) as their lowest priority.

The majority of respondents placed the aesthetic appearance of the site at a lower priority but above financial costs. Several respondents reiterated the close tie between the site/images and the environment/location in which they occur and the fact that there is an interdependence both physically and spiritually between the two.

While all Tribes should be consulted for their specific concerns when conservation of a rock image site is proposed, this sampling suggests that there is widespread consensus that the cultural and spiritual integrity of the site and the potential impacts on the ecology of the area in and around the site are of greatest concern when making decisions about conservation treatment.

*Question:*

- 3) Bearing in mind that there are already legal requirements for consultation with the appropriate Tribes, how much direct involvement with the process would you like to have at sites you regard as under your traditional ownership. [a, b, c, d, or e – please highlight one answer or delete all others]
- a. We would like to involve a trained Tribal conservator (Tribe to provide)
  - b. We would like to involve on site monitors from the Tribe
  - c. We would like regular reporting
  - d. We would like to consult with the independent conservator
  - e. We need no further involvement beyond consultation with the land management agency involved

*Responses:*

#3 options	Respondents						
	A	B	C	D	E	F	G
a. Tribal conservator		(responded a, but stated b.)	X	(responded a. but stated c.)			
b. site monitors	X	X					X
c. regular reporting				X	X		X
d. consult with independent conservator					X		
e. no further involvement by Tribe beyond legal requirements						X	

Amongst issues raised by respondents was the cost for monitoring – if damage not caused by Tribe then they should not shoulder cost but should be involved. One respondent mentioned that they would like Tribal members involved in the cleaning process so that they could receive training in cleaning. One respondent stated e. (no further involvement beyond legally required consultation) but would want to “keep the open line of communication as an option”.

There is less consensus on this topic than on others. While it is clear that communication is important to all, the extent of contact and level of involvement

in any conservation process is varied from total (i.e. a trained Tribal conservator) to minimal.

The responses make it clear that each group has its own specific concerns and wishes regarding involvement.

*Question:*

- 4) How should consultation be achieved? Would you like to be contacted through the land management agency (*LMA*) or to have direct contact with the conservator?

*Responses:*

#4 options	Respondents						
	A	B	C	D	E	F	G
Contact through LMA?	X	X	secondary	X	X	X	X
Direct contact with conservator.?	X		X	secondary	X	Secondary/optional	Secondary

With one exception, all respondents placed consultation regarding conservation treatments/activities should be carried out firstly through the land managing agency. Three respondents stated that direct contact with the conservator was equally important, and three indicated that direct contact with the conservator should be secondary or simply an option open to them. One respondent made no mention of needing any contact with the conservator.

It is clear that initial consultation with the LMA regarding conservation is a priority and that most respondents would also like direct contact with the conservator to greater or lesser degrees.

*Question:*

- 5) Are all sites to be treated equally, or are some sites of special value to the Tribe? Do you feel comfortable with making that information available for land management or conservation purposes?

Responses:

#5 options	Respondents						
	A	B	C	D	E	F	G
Are sites equal?	Yes	Yes	Yes	Yes	Yes		
Are some special?				"one" gets attention from Tribe and therefore the public		Yes	Yes
Do you like providing such info for cons purposes?	Yes, on a case by case basis	Yes, as needed and appropriate	Not clear response, obvious hesitation	No response	No, but will if necessary and folks can be trusted	If necessary	if necessary

Five respondents stated that all sites are of equal importance. Two stated that there are some sites that are of more importance/value than others. All agreed that they would provide sensitive information about certain sites if it was pertinent to planning conservation work, however, it is also clear that there is great concern and caution over disclosing information and that each incident has to be dealt with on a case-by-case basis and taking into consideration the working relationship between the Tribe and the land management agency and conservator.

*Question:*

*(Note: this question refers to the supporting documentation describing various treatment methods that may be considered for use at rock image sites. The documentation is contained in Appendix A with the questionnaire.)*

- 6) Of the treatments described in the following overview of methods currently used in the practice of conservation, which approaches are most appealing to you as a general guideline for the conservation of sites in your area?

*Responses:*

#6 options	Respondents						
	A	B	C	D	E	F	G
Chemical poultice							
Micro blasting				X of "negative space"			
CO <sub>2</sub> blasting							X
Water washing							X
Laser cleaning				X			X?
Over painting							
Heat guns							
Steam cleaning							X
Monitoring							
Other/comments	Did not refer to suggested treatments. Noted need to choose on a site-by-site basis	Stated no preference. Noted need to choose on a site-by-site basis	Stated no specific preference other than "more natural ones".		Stated no specific preference, other than least aggressive first and the need for site-by-site basis for choice.	Stated no specific preference other than "clean, non-destructive ones".	Site-by-site needs stressed. Over painting least attractive. Water or air based techniques preferred.

Only one participant made specific choices from the literature provided.

Majority stated the need to choose method based on a site-by-site basis. There was also a tendency to state a general preference of "natural" methods and those that are least aggressive.

General response suggests that most options would be considered if applicable to the treatment needs of the site.

*Question:*

- 7) Finally, do you have any ideas regarding treatments of sites defaced by graffiti that are not currently being investigated or used by conservation (as listed below)? If so and you are willing, please use the space below to share your ideas with

*Responses:*

#7	
Respondents	
A	None
B	No response
C	None
D	Traditional ceremonies to protect those working with the sites. A local practice and one not "required" to be undertaken by others.
E	None
F	None
G	Need to be mindful of other problems in addition to graffiti (dust, chemical staining, impacts from thrown rocks, wildfires). Observed that some spray paint weathers away on its own and so in certain circumstances could be left to fade. Concern expressed over a known action of wiping pictographs with kerosene to saturate the colors, and the resulting need to consider this and its possible interaction with treatments when designing a treatment for a site.

## 6. Interpretation of results

The responses come from seven communities that are independent entities with their own unique cultural identities. However, their answers to the questions suggest some commonly held concerns and approaches to the care of rock image sites – especially where the treatment of graffiti is concerned.

- All feel that graffiti and vandalism at rock image sites needs to be addressed when it occurs and with the aim of removing or reducing it.
- All consider the preservation of the cultural and ecological integrity of the site to be of utmost importance when considering how to treat a site.
- All consider the financial cost of treatment to be of least importance.
- Most considered consultation with Tribal communities (beyond existing legal requirements) through the appropriate land managing agency about proposed treatments to be of utmost importance, along with the involvement of Tribal monitors to observe the treatment process.
- A majority of respondents felt that all sites should be considered of equal importance when planning for conservation.
- All indicated that treatments should be chosen using the least invasive or aggressive options first, and that these should be a "natural" as possible.

There is a general sense that the more "green" approaches to treatment are preferred for cultural, spiritual and environmental reasons. Indeed, it is apparent from the responses that these three factors are inseparable and interdependent, and therefore must be considered equally when designing conservation approaches.

The fact that there is some agreement among the participants bodes well for further dialogue among the Tribes of the northwest. There appears to be some potential for them to develop some general guidelines for conservation as independent nations with individual needs and beliefs. These guidelines would both serve to protect their interests during conservation of cultural heritage sites, and would help conservators to achieve results consistent with the over reaching uses of the site.

## **7. Future Work**

Further work to bring the various Nations together needs to be done before an actual "set of principles" or conservation guidelines can be contemplated. More discussion at the Tribal level is clearly indicated by the limits of this survey and by the limited number of responses. Further, any guidelines will need to be sufficiently broad to cover most site conservation situations, while remaining sufficiently flexible to allow Tribes to retain the ability to make judgments on individual projects as needed. The advantages of a set of guidelines are that it serves to inform and educate both within a governmental body and across governmental bodies. Both Tribal members and groups such as the Federal and other governmental land managing agencies can benefit from a well crafted set of guidelines for conservations at Native American sites. It is hoped that this type of study can encourage more thought about and communication of ideas regarding conservation. Clearly this is the sort of process that is needed before any firm guidelines can be made by Tribal groups to outside organizations.

## **8. Recommended next steps**

The following recommendations are made to build on the work already accomplished and to determine whether or not there is an interest on the part of the study group to further develop the idea of establishing a set of guidelines for the conservation treatment of rock art sites.

- The distribution of the results of Phase 2 of this current study along with a request of comments specifically addressing their interest in developing guidelines. This recommendation is currently under way.

- The dissemination of examples of such guidelines, or charters (for example the Burra Charter).
- Organizing an Inter-Tribal meeting of the appropriate Tribal representatives to discuss the concept and possible establishment of guidelines.

## 9. References

Australia ICOMOS, 1999, "The Australia ICOMOS Charter for Places of Cultural Significance (Burra Charter)". *Australia ICOMOS* . Accessed 20 June 2007. <<http://www.icomos.org/australia/>>

China ICOMOS, 2000 "Principles for the Conservation of Heritage Sites in China". *China ICOMOS*. English translation 2002. The Getty Conservation Institute. Accessed 19 June 2007. <[http://www.icomos.org/australia/images/pdf/china\\_prin.pdf](http://www.icomos.org/australia/images/pdf/china_prin.pdf)>

ICOMOS, 1964. "International Charter for the Conservation and Restoration of Monuments and Sites (The Venice Charter – 1964)." *ICOMOS*. Updated 6 May 2003. Accessed 20 June 2007. <[http://www.international.icomos.org/charters/venice\\_e.htm](http://www.international.icomos.org/charters/venice_e.htm)>

2007, "Charters Adopted by the General Assembly of ICOMOS", *ICOMOS*. Revised 7 February 2007. Accessed 20 June, 2007. <<http://www.international.icomos.org/charters.htm>>

Odegaard, Nancy, 2005. "*Changing the Way Professionals Work: Collaboration with Preservation of Ethnographic and Archaeological Objects*", Getty Conservation Newsletter 20.1 (Spring 2005) Available web version accessed 13 June, 2007. <[http://www.getty.edu/conservation/publications/newsletters/20\\_1/news\\_in\\_cons1.html](http://www.getty.edu/conservation/publications/newsletters/20_1/news_in_cons1.html)>

**COVER LETTER, SUPPORTING DOCUMENTATION AND QUESTIONNAIRE  
PROVIDED TO SURVEY PARTICIPANTS.**

This appendix contains the materials sent to the group of ten Tribes situated in the Columbia Plateau Region. None of the documents have been edited other than to remove individual's names from the heading of the cover letter.

As the letter originated from the Confederated Tribes of the Umatilla Indian Reservation, their address does not appear as a recipient on the cover letter. They did however submit their own response to the questionnaire.

**Cover Letter:**

January 10, 2006

*[name removed]*, Manager  
Cultural Resources Department  
Confederated Tribes of Warm Springs  
P.O. Box C  
Warm Springs, OR 97761

*[name removed]*, Manager  
Cultural Resources Program  
Yakama Nation  
P.O. Box 151  
Toppenish, WA 98948

*[name removed]*, Representative  
Wanapam Band  
Grant County PUD  
P.O. Box 878  
Ephrata, WA 98823

*[name removed]*, Manager  
History/Archaeology Program  
Confederated Tribes of Colville  
P.O. Box 150  
Nespelem, WA 99155

*[name removed]*, Manager  
Cultural Resources Program  
Nez Perce Tribe  
P.O. Box 365  
Lapwai, ID 83540

*[name removed]*, Manager  
Culture & Heritage Program  
Spokane Tribe  
P.O. Box 100  
Wellpinit, WA 99040

*[name removed]*, Director  
Lake Management Depart./Cultural Resources  
Coeur d'Alene Tribe  
401 Annie Antelope Road  
Plummer, ID 83851

*[name removed]*, Manager  
Cultural Resources Program  
Kalispel Tribe  
P.O. Box 39  
Usk, WA 99180

*[name removed]*, Director  
Tribal Preservation Department  
Confederated Salish & Kootenai Tribes  
P.O. Box 278  
Pablo, MT 59855

Dear Cultural Resources Program Manager/Director,

The Confederated Tribes of the Umatilla Indian Reservation (CTUIR) Cultural Resources Protection Program (CRPP) has joined with conservator J. Claire Dean and conservation scientist Meg Abraham to carry out research aimed at 1) Opening and developing a dialog between conservators and tribal cultural resource managers with regard to the conservation of rock image (rock art) sites and 2) Identifying culturally appropriate approaches and methods for the conservation of rock image sites, in particular the treatment of graffiti at rock image sites.

J. Claire Dean is a professional conservator with 25 years of experience in her field, the last 15 years working closely with various Native American tribes (including the CRPP)

on the conservation of rock image sites. Meg Abraham is a conservation scientist who has recently been working with Claire to develop environmentally friendly approaches to removing graffiti from rock image sites.

This work has been funded by a grant from the National Center for Preservation Technology and Training (NCPTT) as part of their mission to advance the application of science and technology to historic preservation - a task they accomplish through various means including research and partnerships with entities (such as tribal cultural resource offices) directly involved in the preservation and conservation of the nation's heritage.

We ask that you help us in this effort by reading the enclosed document and completing the associated questionnaire. The questionnaire aims to gather responses from tribal cultural resource offices with regard to the current state of conservation practice as it pertains to the care of rock image sites. Current conservation practices are outlined in the documents that accompany the questionnaire. Your participation in this research is invaluable in helping develop and improve the conservation of rock image sites by identifying more culturally appropriate approaches, methods and materials.

Finished questionnaires should be returned to the CRPP via email to [tearafarrow@ctuir.com](mailto:tearafarrow@ctuir.com) at your earliest convenience.

Your answers and comments will be read and collated to form a document that will review and interpret the responses. Eventually a paper reporting on our findings will be published and disseminated to all recipients of the questionnaire.

All information provided to us will be held in strictest confidence. Thank you in advance for your help with this project and if you have any questions please feel free to contact J. Claire Dean the Principle Investigator for this project. She can be reached by e-mail at [clairedean@aol.com](mailto:clairedean@aol.com).

Respectfully,

Teara Farrow  
Program Manager  
Cultural Resources Protection Program

Cc: Claire Dean, Dean & Associates Conservation Services  
File: 363-04

**Supporting documentation:**

**EVALUATION & MONITORING TREATMENTS FOR  
ROCK IMAGES**

**By J. Claire Dean & Meg Abraham  
Dean & Associates Conservation Services**

**The Aims and Purposes of this Study**

The field of conservation has developed over the past century out of the traditions of art restoration. The early art restorers often viewed their job as primarily one of returning an object to an appearance that reproduced the way it looked when the object or artifact was made or even the way they felt it should appear after some years of aging (antiquing).

Modern conservators have developed a more sophisticated approach to their profession and now place primary emphasis on the preservation of the art or artifact. With museum displays and personal art this may include, among other treatments, the removal of damaging dirt, coatings, over paints, etc. to reveal the images. It may also include stabilization of flaking substrates and on rare occasions the retouching of images to improve the visual appearance of the art. It is generally recognized that the wishes of the owners and artists should be incorporated into the plan of conservation for art and artifacts, but visual preservation concerns usually are of greatest importance with these objects.

When an object is not designed or used primarily as an art object, but rather as a sacred, ritual or cultural object, the aims of the conservation treatment may be subtly altered. In these instances, the primary goals may alter from one of preservation of the visual image (as a means of enhancing human experience) to preservation of the meaning of the object or the current uses of the object. For example the ritualized repainting of a Buddha image may alter its appearance over time (something traditional conservation attempts to minimize) but is an important part of its spiritual function and must be recognized by the conservator as a necessary part of maintenance of the piece.

This subtle shift in the aims of conservation must be recognized when dealing with the conservation of rock image sites. As far as is commonly known these sites were not created simply as pleasant images for casual viewing, rather they symbolize or embody the beliefs and practices still alive and well in many cultures today. With this in mind, it is ethically the responsibility of the conservator to respectfully investigate the purposes of the site, the traditional concerns of the users of the site, and the intention of the original creators of the site and of their decedent's regarding the site. By doing this more culturally appropriate and acceptable suggestions can be made for the conservation of rock image sites.

Unfortunately, this is not always an easy task. In some cases it is not easy to locate all the traditional groups affected by a site. Further, traditions confined to a group may be

considered private or inappropriate for public discussion. Finally, simple lack of communication with, or lack of access to the various traditions can limit a conservator's understanding of the issues of greatest concern to first nations and other users of the sites.

The following brief questionnaire is intended as a means of opening a dialogue with groups of people who have traditional stewardship over these objects and places. We have chosen to keep these first steps small and to only address the issues of graffiti removal from rock image sites. We do not intend or even believe it is possible to come to complete or final conclusions about best approaches to the difficult questions of how one conserves all rock image sites. Rather we hope to improve the dialogue between native groups, land management organizations and conservators. Ultimately, the aim of this brief study is to give these various groups a few of the tools necessary to better discuss and consult each other on the overall aims of conservation of a site.

With this in mind, we respectfully ask that you consider the following questions about the care of these sites. With your permission, your answers will be compiled into a survey overview and made available to conservators, land management organizations, and the tribes involved in this survey (Federally recognized tribes within the Columbia Plateau), as well as other interested parties. We assure you that your responses will not be considered a definitive consultation on specific questions of conservation. Again, this is only intended to broaden the discussion of conservation issues and to improve dialogue between the various responsible parties. Individual responses to the questions will not be made available to others without your prior permission, rather they will only be used anonymously incorporated with others into the survey results.

We thank you in advance for your kind participation and hope that, in the end, this information will aid all the participants in the development of their own views about the best practices for maintaining these sites.

### **Conservation Methods Currently Used In Practice**

The choices one makes as to how to treat a damaged or at risk site depend on the types of deterioration and damage occurring at the site (in this study the graffiti), the materials in need of conservation (in this study the rock face and rock images), the cultural sensitivities of the site, the available future maintenance for the site, and the health risks to the people involved with the conservation and use of the site.

The following is a brief survey of methods available for the conservation of rock image and sacred or ritual sites that have been damaged by the addition of graffiti. The assumption is that the graffiti has been applied using one of the following materials which are unfortunately commonly used to deface sites: Spray paint (acrylic based binders with a variety of pigments) and marker pens (acrylic polymers, silicone, and solvents with various pigments). Scratched graffiti has not been included in this study in order to keep this survey concise and manageable. The treatments described below have some ability to reduce or remove the unwanted graffiti materials in all cases. Therefore,

the discussion will concentrate on the impact of the treatment on the site and on the people who use the site.

The treatments covered are, chemical poulticing, micro blasting, CO<sub>2</sub> blasting, water washing, laser cleaning, over painting, heat guns, steam cleaning and non invasive monitoring (no treatment beyond monitoring to prevent further graffiti damage). It is important to note that a qualified conservator may find it helpful to use a combination of techniques in order to achieve the best results when conserving a site.

**Chemical Poultices:** Perhaps the most common treatment for graffiti removal is the use of a chemical poultice. This involves impregnating cloth or clay with a solvent in order to create a poultice. The intent is to maximize the time the solvent remains in contact with the surface being treated – in this case the graffiti. The solvents used are usually chosen using treatment tests that evaluate the solubility of the graffiti and that of any painted rock images (pictographs) underneath. The aim is to find a solvent that will rapidly remove the graffiti while leaving the original image intact. It is not usually difficult to find appropriate solvents for this job as the waxes and acrylics used as a binding medium for modern paints and markers are very different from the organic and water binders typically used to create the paints used for pictographs. Chemical treatments are often inexpensive, effective and comparatively fast acting.

The drawbacks to chemical poultices are that they tend to release a large amount of the solvents (which are volatile compounds) into the surrounding environment. Depending on the compound, the solvents may impregnate the rock face with residues, evaporate into the surrounding air, and leach into the water system. The purpose of the cloth or clay is to minimize this effect but it can not be eliminate. The addition of many of the most effective solvents to the environment can result in reduced natural biological activity at the site (such as reductions in the formation of lichen, and desert varnishes), increased health risks for the conservator from solvent exposure (due to uptake of the solvents through their skin or by breathing them in), and to a lesser extent to the people who regularly use the site and may receive similar solvent exposure in the air and in drinking water.

**Micro Blasting:** The use of a wide variety of materials in micro “bead” blasters is another commonly used and excepted technique for removing graffiti. As environmentally friendly beads can be chosen such as alumina (sand), glass and walnut shell, the environmental effects are often seen as less harmful.

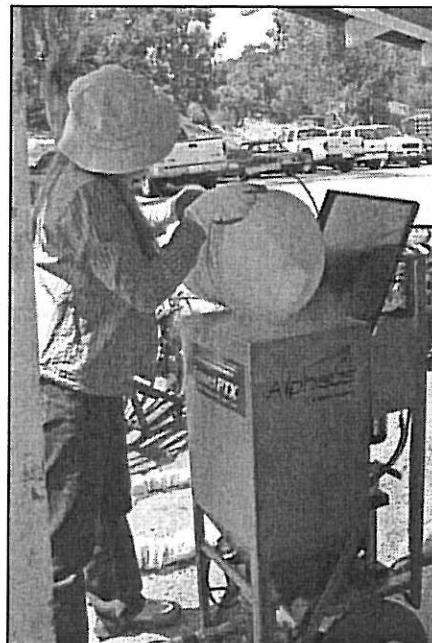
This technique also has some drawbacks. The method is often more appropriate for areas adjacent to the site than for removal of graffiti directly on rock images. That is because the technique cannot tell the difference between images made by modern binder/pigment combinations and by older or more traditional techniques such as hematite pigment painting or incising of the rock. All images can be removed using a micro blasting cleaner. The technique will also remove patinas, lichens and other biological encrustations, although the surface will likely allow for the regrowth of these biological elements in the future. The systems require a power source to run the micro blasters. If

blasting happens to remove the surface layer of rock (which is often slightly hardened by natural geological processes) the resulting exposed rock may be softer and more prone to erosion. Finally, it may leave a rough or porous surface more able to take up water and pollution from the surrounding air. Thus it is not entirely optimal for cleaning on images themselves.

**CO<sub>2</sub> Blasting:** In the case of CO<sub>2</sub> (carbon dioxide) blasting the overall concept is the same as other forms of micro blasting (Figure 1). There is one significant difference, which is that the substance being used to abrade the surface is small pellets of solid CO<sub>2</sub>. The pellets are frozen and used like sand or glass beads. The main advantage is that the pellets return to ambient temperatures in the environment after being ejected onto the rock art surface. At standard temperatures and pressures CO<sub>2</sub> is a gas so the abrasive pellets simply evaporate into the surrounding air leaving no evidence of the treatment in the environment. Since carbon dioxide is a normal chemical in the environment (produced by the human respiratory system as well as burning fossil fuels), the amount of CO<sub>2</sub> added to the environment by this type of process is insignificant. Thus the treatment is relatively harmless with regards to adding pollutants to the surrounding environment.

This technique has the same drawbacks as other micro blasting techniques. It also poses some additional technical problems as the control of the size and velocity of the micro beads of CO<sub>2</sub> is more difficult than when sand or other room temperature solids are used. This fact tends to complicate the use of the technique when removing over paint from rock image surfaces. Finally, the equipment used to generate the CO<sub>2</sub> pellets is more cumbersome and expensive than conventional micro blasters.

Figure 1. Examples of CO<sub>2</sub> blasting and equipment



**Water Washing:** Water washing is often a very effective and inexpensive way to remove water soluble graffiti damage. Water can be used by a professional conservator, or in some cases, rain and humidity can naturally mitigate the effects of graffiti damage

to sites. Unfortunately, most graffiti is applied using non-water soluble materials like those listed above. Consequently, in the vast majority of cases water is not effective as a tool for removing graffiti. Further, some rock types as well as rock image pigments and binders are soluble in water. Therefore, it is important to consider circumstances even with this apparently harmless chemical treatment.

**Laser Cleaning:** Laser cleaning is a technique widely used across Europe to remove pollution and graffiti from stone monuments. The technique relies on a high intensity of laser light to both heat and chemically break down the graffiti. Because of the small spot size of the laser light used in treatments this process has the advantage of being highly localized, thereby leaving untreated areas free from contamination or effects from the treatment. The treatment is also highly controllable so that trained professionals are able to remove a desired amount of over paint or graffiti with greater accuracy. Further, while the technique can only break down the chemicals used to make the paint, markers, or other graffiti pigment/binder combinations, the treatment itself does not add to the chemical loading of the environment. It also appears from past conservation efforts, that the treatment is less aggressive than many when it comes to removing graffiti. It also seems to have less impact on the re-growth rates of natural biological features such as lichens and patinas. These biological features are often well adapted to light, because they have naturally developed to withstand the sun's rays.

The disadvantages of this type of graffiti removal treatment are that the systems are more expensive and cumbersome to move around a site. They also require electricity, either supplied by a generator or an extension to a mains power supply. The laser treatment may slightly alter the color of pigments used to create images in pictographs and may also slightly alter the color of rock patinas if aggressive cleaning is required. Finally, the technique is more effective on some types of graffiti than others (based on the pigments and media components of the graffiti), and safety glasses are required to work with this type of equipment. Ear protection may also be needed if the treatment involves the prolonged use of the laser equipment and generator. Lastly, if the site is in close proximity to public areas the work site may need to be screened (easily done using a tent frame and bed sheets) to prevent the travel of any accidentally reflected laser beams that could in turn cause injury to people not equipped with the appropriate eye protection.

**Over Painting:** Over painting has been used in some instances to obscure the graffiti but has severe problems as a treatment. While it is both fast and very inexpensive, it may lead to further damage to the site and is not easily reversible. Natural rock surfaces are normally porous and support a wide variety of biological activity on their surfaces. Over painting seals the surface preventing water from moving freely into and from the surface which can result in flaking of the surface (especially problematic in areas with high salt content or where the water will freeze during some seasons). Additionally, the paint will almost always prevent the growth of lichens and surface patinas. Finally, the paint may intermingle with pigments used to make pictographs and can cause the loss of surface details and colors as the paint sloughs off over time. For these reasons, over painting is not recommended as a treatment except in the worst examples of graffiti, as a temporary emergency measure and in areas with little or no artistic or cultural value. On another

level, the addition of yet more paint (even though its purpose is to hide vandalism) can be seen as “adding insult to injury” and simply compounding the problem.

**Heat Guns:** Heat treatments have can be used with some forms of graffiti as a means of lifting the pigments from the surface of the rock. The treatment can be both inexpensive and relatively quick and easy. The differences in the coefficient of thermals expansion (the amount of volume increase when a material is heated) between the binding medium of the graffiti material and the rock coupled with the softening of some paint media (especially polyesters and acrylics) allowing the graffiti paint to peel from a rock surface.

The drawbacks to this treatment are that it is not effective on markers, it can cause lifting of fragile rock surfaces, pictograph pigments, and patinas, and that it may, if used inappropriately, cause some cracking or damage to the rock surface. Also, like some of the previously mentioned techniques, a heat gun requires a power source in the field. Therefore, this technique is only used by skilled professional conservators in a few instances where the graffiti paint responds to the heat and the rock face is robust and suited to the technique.

**Steam Cleaning:** The use of steam for cleaning, delivered through a small portable gun-like device connected to a heated water reservoir, has proved useful for removing stubborn dirt layers on stone. As in methods of water washing discussed above, it is an environmentally friendly and cheap technique. Its impact on the re-growth of biological agents is likely similar to that for water washing methods having little impact on the rate of re-growth.

On the negative side it is slow and requires the use of an electrical power source. Also in keeping with water washing, it has less impact on non-water soluble materials, such as spray paint, but rather relies more on the impact of the heat to cause paint layers to soften, expand and peel away from the rock surface. It cannot be used on surfaces that are weak or where there might be pictograph paints that are water soluble or otherwise fragile.

**Monitoring:** Ideally, graffiti removal would be left to nature as natural processes of wear are often the most benign ways of removing paints and other marks. Thus if a site can be well monitored and the graffiti is not diluting the value of the site for study or ritual use no treatment at all may be a good option.

Unfortunately, the presence of graffiti often seems to draw attention to the site as a place of vandalism and invites further destruction. Further graffiti may in some cases interfere with traditional uses of the site or the study of the depicted images at a site. Finally, in severe instances, the graffiti may cause the same types of damage to a rock face as those outlined in the above discussion of over painting. That is sealing of the rock surface, and reduction of patina and lichen formation. In these cases the graffiti should be removed by one of the above mentioned techniques.

**Questionnaire:**

**QUESTIONNAIRE FOR THE EVALUATION & MONITORING  
TREATMENTS FOR ROCK IMAGES**

**Please complete and return to Teara Farrow via email ([tearafarrow@ctuir.com](mailto:tearafarrow@ctuir.com)) at your earliest convenience.**

- 1) If a site has been defaced by graffiti, should it be conserved (cleaned up)? If so what is most important to you as a group, the cleaning of the site or the impact of cleaning on the site and surrounding environment and area?
- 2) what criteria for cleaning are most important to you (please rank)
  - a. Preservation of the cultural/spiritual uses of the site ( )
  - b. Esthetic concerns – preservation of the images ( )
  - c. Financial concerns – costs involved ( )
  - d. Ecological concerns – prevention of contamination of the broader environment during cleaning ( )
- 3) Bearing in mind that there are already legal requirements for consultation with the appropriate tribes, how much direct involvement with the process would you like to have at sites you regard as under your traditional ownership. [a, b, c, d, or e – please highlight one answer or delete all others]
  - a. We would like to involve a trained tribal conservator (tribe to provide)
  - b. We would like to involve on site monitors from the tribe
  - c. We would like regular reporting
  - d. We would like to consult with the independent conservator
  - e. We need no further involvement beyond consultation with the land management agency involved
- 4) How should consultation be achieved? Would you like to be contacted through the land management agency or to have direct contact with the conservator?
- 5) Are all sites to be treated equally, or are some sites of special value to the tribe? Do you feel comfortable with making that information available for land management or conservation purposes?
- 6) Of the treatments described in the following overview of methods currently used in the practice of conservation, which approaches are most appealing to you as a general guideline for the conservation of sites in your area?
- 7) Finally, do you have any ideas regarding treatments of sites defaced by graffiti that are not currently being investigated or used by conservation (as listed below)? If so and you are willing, please use the space below to share your ideas with us.

Thank you for your time.

## SELECTED RESPONSES TO THE QUESTIONNAIRE FOR THE EVALUATION AND MONITORING TREATMENTS FOR ROCK IMAGES.

This appendix contains examples of responses from the seven completed questionnaires. They have been chosen as being either representative of a general response or particularly pertinent. In keeping with our concerns for confidentiality, individual respondents have not been identified other than by the letter label assigned to them in the main body of the report.

Responses have not been edited other than to define acronyms or to remove names that would identify the respondent.

The following quote from Respondent G prefaced their response to the questionnaire. It is included here as a response due to its significance.

"Please note: These responses were prepared by [name removed], the Tribal Archaeologist for the [name removed]. They are based on my experiences over the past six years as a tribal employee and archaeologist. Some of these questions deal with issues of traditional spirituality and religious practice, and I have tried to answer the questions based on my interactions with [name removed] tribal members. Consultation with traditional cultural authorities may yield different answers, and I would (obviously) defer to their opinions. – [name removed]." (Respondent G)

### Selected Responses:

#### Question:

- 1) If a site has been defaced by graffiti, should it be conserved (cleaned up)? If so what is most important to you as a group, the cleaning of the site or the impact of cleaning on the site and surrounding environment and area?

"The site should be cleaned if defaced by graffiti. Both the impact to the site and the effects to the surrounding environment are equally important. All sites are connected in some way and by contaminating one area to clean another would be missing the point of conserving the site in the first place. Other impacts related to cleaning such as trampling site areas or road access should be weighed and considered on a project by project basis." (Respondent A)

"If possible, yes. If the site can be cleaned and the effort will result in restoring the site to a state that is even marginally better than leaving the graffiti, then it should be cleaned." (Respondent B)

"I think it should be cleaned to as close to it's original state as possible. Criteria should be attained by each Tribe or area Tribe's if it is within

common area's. Investigation to find vandals is very important. If you have a law you should enforce that law accordingly." (Respondent C)

"The cleaning of a site would be more important than the particular method; provided the methodology was not intrusive to the long term spiritual/traditional uses of the site" (Respondent D)

"Yes, the site should be cleaned if defaced by graffiti. The cleaning of the site and the impact to the surrounding environment/area are equally important because both are tied together. The creator of the rock image site chose that location because of its surrounding environment." (Respondent E)

"It *should* be cleaned up. The impact of the cleaning on the site and the surrounding area is more important. There are other issues that may arise that could change that position." (Respondent F)

"In most cases, I would recommend that a vandalized rock image site be cleaned up as much as possible without doing further damage to the images. It has been my observation that graffiti, once started in an area, tends to draw other graffiti. Cleaning the graffiti is an important step to preventing further damage.

Given that most conservation practices use chemicals and other foreign materials in only limited quantities, I would not expect that the cleaning or conservation would result in significant negative environmental effects. Therefore, the cleaning of the site would be more important." (Respondent G)

*Question:*

- 2) what criteria for cleaning are most important to you (please rank)
- a. Preservation of the cultural/spiritual uses of the site ( )
  - b. Esthetic concerns – preservation of the images ( )
  - c. Financial concerns – costs involved ( )
  - d. Ecological concerns – prevention of contamination of the broader environment during cleaning ( )

"Cultural/spiritual uses are synonymous with ecological harmony. A place that is in stress; though once a source of spiritual renewal can be tilted to a source of spiritual contagion. Under this consideration the ranking is falsely expressed but approximates our best answer."  
(Respondent D – commenting specifically on the phrase "Ecological concerns" used in option d. of question 2.)

"As you may know, many rock image sites are "tended" by traditional practitioners, and preservation of this traditional use is of highest

importance. Damage to the images, as well as the surrounding environment, would make it difficult for these traditional practices to continue, so esthetic concerns and ecological concerns are closely related to the preservation of the cultural/spiritual uses of the site. When "financial concerns" are ranked last, this should not be taken to mean that the [name removed] would embark on a conservation project regardless of cost. It would be a factor in the process of making a decision about how to proceed." (Respondent G)

*Question:*

- 3) Bearing in mind that there are already legal requirements for consultation with the appropriate tribes, how much direct involvement with the process would you like to have at sites you regard as under your traditional ownership. [a, b, c, d, or e – please highlight one answer or delete all others]
- a. We would like to involve a trained tribal conservator (tribe to provide)
  - b. We would like to involve on site monitors from the tribe
  - c. We would like regular reporting
  - d. We would like to consult with the independent conservator
  - e. We need no further involvement beyond consultation with the land management agency involved

"b. We would like to involve on site monitors from the tribe. We would also like to have tribal members involved in the cleaning process – thus, if training could be incorporated into the cleaning project that would be most beneficial." (Respondent A)

"d. We would like to consult with the independent conservator and regular reporting." (Respondent E)

"We need no further involvement beyond consultation with the land management agency involved Yet we would like to have the open line of communication as an option." (Respondent F)

"Ideally, we would like to follow both options "b" and "c." One of the issues that would need to be addressed is the financial support for the costs of a tribal monitor. Expecting the [name removed] to cover the costs of a monitor to assist in the clean up of a problem that the [name removed] and its members did not create would put an unfair strain on tribal finances." (Respondent G)

*Question:*

- 4) How should consultation be achieved? Would you like to be contacted through the land management agency or to have direct contact with the conservator?

"Both. First we would like to be contacted through the land management agency regarding each individual project or group of projects – we would also like to be involved in the selection process of the conservator – do they try to utilize non-chemical processes or are they all about utilizing chemicals in the cleaning process. As a relationship is developed with the conservator throughout the course of the project, specific project details could be worked out directly between the conservator and the tribes. These decisions would fall within general project guidelines established by all involved parties at the start of the project. The land manager will always remain as the projects lead and act as an intermediary if the conservator and the tribes disagree on a course of treatment." (Respondent A)

"Directly with the conservator and as needed by the land management agency for overall management activities." (Respondent C)

"Consultation shall always be preformed via the land managing agency. The participation of the conservatory in such discourse may occur when; a) the relationship has been established and b) specific to technical considerations of particular tasks." (Respondent D)

"Both. Initial contact from the land management agency and then the Tribe(s) and the land management agency would work together to select a conservator. It is important that the conservator be sensitive to Tribal beliefs and work directly with the Tribe(s) to select the best conservation method." (Respondent E)

"Contact through the LMA [Land Management Agency] with option for contact with the conservator." (Respondent F)

"Initial contacts and consultation should be between the land management agency and the Tribal Historic Preservation Officer ([name removed]). As consultation proceeds, contacts between technical level staff (i.e., the conservator and tribal employees working for the THPO [tribal Historic Preservation Officer]) may become appropriate." (Respondent G)

*Question:*

- 5) Are all sites to be treated equally, or are some sites of special value to the tribe? Do you feel comfortable with making that information available for land management or conservation purposes?

"As a general blanket statement "Yes" all sites should be treated equally. NRHP [National Register of Historic Places] criteria or status should not be used to prioritize traditional cultural sites proposed for treatment. Many sites and TCPs [Traditional Cultural Property] have

not been formally recorded or evaluated in a way that can be quantified and used to compare between the needs of other sites. Each affected site should be evaluated on a case by case basis in consultation with the land manager, conservator, and tribes. Having the tribes provide additional traditional knowledge about the resource to the conservator or land manager would be necessary to properly treat the site. This knowledge would be provided on a project basis to allow the tribes the opportunity to research and contact traditional Tribal members about the resource and monitor what traditional knowledge is disseminated.”  
(Respondent A)

“All sites are important and deserve to be protected. We would make it clear that the site is important, if more information is necessary, we would share whatever information is possible to share without threatening the value of the site.” (Respondent B)

“There are some sites that some families do not want to make public. But, all sites are of great importance and would be treated equally. Some, are just known by families and they want it to stay that way.”  
(Respondent C)

“All imagery that we are aware of intrinsically have equal value yet one continues to receive particular attention by the Tribe and unfortunately the recreating public.” (Respondent D)

“All sites should be treated equally. Of course there are some sites that receive more attention than other but that does not mean they are more valuable, each is equally valuable to the history and culture of a Tribe. Sensitive information such as the special value of a site should remain confidential as much as possible. Only minimal information should be shared and only if a good established working relationship has been made with both the land managing agency and conservator.”  
(Respondent E)

“Some sites are of special value to the tribe and this could be made available to the LMA [*Land Management Agency*].” (Respondent F)

“I assume that this question is asked because time and funds are limited, and it often becomes necessary to select certain sites for conservation above others. It does appear that some rock image sites within the traditional territories of the [name removed] are of somewhat higher value than others. Nevertheless, priorities for conservation would have to be a subject for consultation with the THPO [*Tribal Historic Preservation Officer*]. To help insure the privacy of traditional religious practitioners, we would like to make sure that only the minimally necessary information is released to the public and land

management agencies regarding the reasons for selection of one site over another." (*Respondent G*)

*Question:*

- 6) Of the treatments described in the following overview of methods currently used in the practice of conservation, which approaches are most appealing to you as a general guideline for the conservation of sites in your area?

"The preferred treatment would be the most effective, least intrusive and nontoxic method available. Treatment methods and techniques should be decided on a project by project basis in consultation with the land manager, conservator, and the tribes. These recommendations could also include methods that would be considered toxic or invasive. Although not preferred, in some instances these invasive techniques may be appropriate and the tribes would appreciate an honest assessment of the project and expected outcome." (*Respondent A*)

"No preference. Each has to be considered on a case by case basis." (*Respondent B*)

"The more natural ones appeal to me more because of the natural state of the approach." (*Respondent C*)

"The combination of microblasting of "negative space" and laser cleaning of imagery space appears to be the most suitable approach for the rock art imagery we have in the [name removed]." (*Respondent D*)

"Each site is going to be different so conservation treatment will vary project by project. The less invasive approach would be preferred however depending on the amount of vandalism/graffiti/etc the conservation treatments may need to be more aggressive. The treatment methods should be done in direct consultation with the Tribe(s) and conservator." (*Respondent E*)

"The clean, non-destructive ones." (*Respondent F*)

"Techniques to be used in the conservation of an individual site should be chosen on a case-by-case basis. That being said, overpainting is probably the least attractive. "Over cleaning" is also a problem, because this tends to create an unnatural blank spot on the surface of a pictograph panel, further damaging the site. Techniques that use water or air (i.e. carbon dioxide) in some form would be preferred for spiritual reasons over techniques that use more aggressive chemicals." (*Respondent G*)

Question:

- 7) Finally, do you have any ideas regarding treatments of sites defaced by graffiti that are not currently being investigated or used by conservation (as listed below)? If so and you are willing, please use the space below to share your ideas with us.

"I don't really know anything that is being used in the professional field to date and do not have any useful recommendations at this time"  
(Respondent C).

"Prior to work being conducted at these places I have sought the assistance of community traditional-healers/practitioners to "smudge" and if needed "scrub" a defaced rock art site. Physically, these actions appear to be without tangible conservative value yet within the hearts and minds of the community such an action prevents workmen being injured are bring something home that is corrosive to the wellbeing of the community. As monetary compensation for such a treatment would taint and thereby undermine the efficacy of such an action the community's traditional-healers/practitioners perform this service as a duty. Granted such practice is only local, and may be idiosyncratic to the [name removed] Tribe, we do not require such an action by others."  
(Respondent D)

"We have recently completed a re-survey of 20 previously recorded pictograph sites in [geographic region name removed], and it is clear that many of them are subject to a variety of hazards. Graffiti painting is certainly one of these, but conservationists should be mindful of other problems, as well. Damage related to road proximity (dust accumulation, chemical staining, impact damage from thrown rock, etc.) and wildfires can be equally devastating to long-term preservation of the images.

One thing that has become apparent is that spray paint simply is not as durable as the pigment used in the creation of pictographs. In some cases, spray painted graffiti has faded markedly through time while pictographs in the same location have remained relatively vibrant. In some cases, the best conservation practice may simply be waiting for the spray paint to fade.

When it comes to designing a conservation practice for a particular site, it would also be important to determine what kinds of chemicals may have been applied to the images in the past. We have recently become aware of the practice of using a kerosene wipe over pictographs to make the images more apparent. Although kerosene is a light oil, we are not sure what impact this hydrocarbon may have on

the long-term status of the pictographs. We also have no information about how kerosene traces may interact with chemicals used to remove graffiti. Tests should be conducted on the interaction of cleaners and kerosene before they are applied to pictographs.”  
(Respondent G)